UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XB126NM

Site Name: Salt Flats

Precipitation or Climate Zone: 10-16"

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on level to gentle slopes which average 3 percent or less and rarely exceed 8 percent. Exposures are variable although usually not significant, and what is normally a uniform slope may be broken intermittently throughout the site by natural playas, potholes, or arroyos. Elevations range from about 6000 to 7500 feet.

Land Form:

1. Flood plain
2. Basin floor
3.

Aspect:

1. not significant
2.
3.

	Minimum	Maximum
Elevation (feet)	5800	7500
Slope (percent)	0	8
Water Table Depth (inches)	--	--

Flooding:	Minimum	Maximum
Frequency	occasional	--
Duration	brief	--

Ponding:	Minimum	Maximum
Depth (inches)	--	--
Frequency	-	--
Duration	--	--

Runoff Class:

Hydrologic units C-D

CLIMATIC FEATURES

Narrative:

Average annual precipitation varies from about 10 inches to just over 16 inches. Fluctuations ranging from about 5 inches to 25 inches are not uncommon. The overall climate is characterized by cold dry winters in which winter moisture is less than summer. As much as half or more of the annual precipitation can be expected to come during the period of July through September. Thus, fall conditions are often more favorable for good growth of cool-season perennial grasses, shrubs, and forbs than are those of spring.

The average frost-free season is about 120 days and extends from approximately mid-May to early or mid-September. Average annual air temperatures are 50 degrees F or lower and summer maximums rarely exceed 100 degrees F. Winter minimums typically approach or go below zero. Monthly mean temperatures exceed 70 degrees F for the period of July and August.

Rainfall patterns generally favor warm-season perennial vegetation, while the temperature regime tends to favor cool-season vegetation. This creates a somewhat complex community of plants on a given range site which is quite susceptible to disturbance and is at or near its productive potential only when both natural warm- and cool- season dominants are present.

	Minimum	Maximum
Frost-free period (days):	51	171
Freeze-free period (days):	130	252
Mean annual precipitation (inches):	10	16

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.40	.91	12.9	47.0
February	.43	.65	16.6	51.2
March	.47	1.10	20.9	57.1
April	.30	.49	26.1	65.3
May	.46	.98	33.4	74.2
June	.51	.57	41.4	84.2
July	2.15	3.45	50.4	85.1
August	2.28	3.03	48.7	82.4
September	1.29	1.68	41.4	77.9
October	.81	1.12	29.4	69.2
November	.38	.71	19.1	57.3
December	.53	.95	13.1	48.9

Climate Stations:

					Period		
Station ID	290640	Location	Augustine2E	From:	05/01/26	To:	07/31/00
Station ID	296812	Location	Pietown 19NE	From:	09/01/88	To:	07/31/00
Station ID	297180	Location	Quemado	From:	08/01/15	To:	07/31/00

Period

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from wetlands or streams.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The soils of this site are typically deep, silty clay loams to clay loams and clays, and are affected by both high pH and total soluble salts. Surface crusting and sealing is common. Permeability is moderately slow to very slow, and ponding is not uncommon following summer rainstorms. Total available water capacity is high, however the availability to plants is often low. Characteristic soils are Ustollic Camborthids- sodic (as mapped in Catron County)

Parent Material Kind: Marine deposits

Parent Material Origin: Gypsum

Surface Texture:

1. Fine sandy loam
2. clay
3. silty clay loam, silty clay

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: --

Surface Fragments <=3" (% Volume): --

Surface Fragments >3" (% Volume): --

Subsurface Fragments <=3" (%Volume): 5-8

Subsurface Fragments >=3" (%Volume): --

	Minimum	Maximum
Drainage Class:	Well	--
Permeability Class:	Impermeable	Very slow
Depth (inches):	0	60
Electrical Conductivity (mmhos/cm):	4.0	16.0
Sodium Absorption Ratio:	--	--
Soil Reaction (1:1 Water):	7.9	9.0
Soil Reaction (0.1M CaCl2):	--	--
Available Water Capacity (inches):	2	3
Calcium Carbonate Equivalent (percent):	--	--

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 Narrative Label: HCPC

Plant Community Narrative:
The aspect of this site is generally one of a grassland mixed with scattered shrubs such as fourwing saltbush, shadscale, and greasewood. Alkali sacaton is both the composition dominant and the aspect dominant for the site. Forbs are a variable and minor component of the plant community.

Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	35
Bare ground	44
Surface gravel	1
Surface cobble and stone	0
Litter (percent)	20
Litter (average depth in cm.)	3
Surface Gravel (% cover)	

Plant Community Annual Production (by plant type):

	Annual Production (lbs/ac)		
Plant Type	Low	RV	High
Grass/Grasslike	468	871	1275
Forb	17	31	45
Tree/Shrub/Vine	83	154	225
Lichen	--	--	--
Moss	--	--	--
Microbiotic Crusts	--	--	--
Totals	550	1025	1500

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	SPAI	Alkali sacaton	461-564	461-564
2	BOGR2 PAOB MUWR PLJA	Blue grama Vine mesquite Spike muhly Galleta	154-205	154-205
3	PASM	Western wheatgrass	51-103	51-103
4	DISSPI MURI	Inland saltgrass Mat muhly	51-103	51-103
5	ARIST	Threeawns	10-51	10-51

Plant Type - Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
6	ATCA2	Fourwing saltbush	51-154	51-154
7	ATCO SAVE4 ERNAN5 GUSA2	Shadscale Greasewood Rubber rabbitbrush Broom snakeweed	10-103	10-103

Plant Type – Forb

8	2FP	Perennials	19-32	19-32
9	2FA	Annuals	6-19	6-19

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Growth Curves

Growth Curve ID NM 0315

Growth Curve Name: HCPC

Growth Curve Description: WP-2 Salt Flats- Mixed warm/cool season grassland with shrubs.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	8	15	10	9	20	25	8	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:
This range site provides habitats which support a resident animal community that is characterized by pronghorn antelope, coyote, black-tailed jackrabbit, spotted ground squirrel, banner-tailed kangaroo rat, Botta's pocket gopher, silky pocket mouse, sparrow hawk, meadowlark, Western spadefoot toad, leopard lizard, short-horned lizard, and prairie rattlesnake. The common raven and prairie hunt over the site, and chestnut-collared longspur winters on it. Where playas and potholes are present, killdeer nests, mourning dove waters, and desert shrimp and tiger salamander are occasionally present.

Hydrology Functions:
The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	Hydrologic Group

Recreational Uses:

Recreation potential on this site is limited by highly saline or alkaline soils and the site's general lack of natural beauty. Activities include horseback riding, hunting for pronghorn antelope, hiking, nature observation, photography, picnicking, and camping.

Wood Products:

This site has no significant value for wood production.

Other Products:

At its potential, this is a very productive range site suitable for grazing by most kinds and classes of livestock. It is frequently more productive than surrounding sites and can best be managed when fenced separately and grazed intensively for short periods of time, three to four months or less, then deferred or rested in different seasons from year to year.

Site deterioration due to inadequately managed grazing usually results in a decline in alkali sacaton, western wheatgrass, vine-mesquite, and blue grama. Woody species increase under this circumstance and may dominate the site eventually if the condition is not reversed. Production favorable to grazing by livestock is then reduced substantially.

Other Information:	
Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month	
Similarity Index	Ac/AUM
100 - 76	2.5 - 3.5
75 – 51	3.2 - 4.8
50 – 26	4.6 - 9.5
25 – 0	9.5 +

Plant Preference by Animal Kind:

	Code	Species Preference	Code
Stems	S	None Selected	N/S
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruit/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Animal Kind: Livestock

Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Alkali sacaton	Sporobolus airoides	EP	D	D	D	D	D	P	P	P	D	D	D	D
Blue grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Vine-mesquite	Panicum obtusum	EP	D	D	D	D	D	D	D	D	P	P	D	D
Western wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Fourwing saltbush	Atriplex canescens	EP	P	P	P	P	P	D	D	D	D	D	D	P
Spike muhly	Muhlenbergia wrightii	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

Supporting Information

Associated Sites:

Site Name	Site ID	Site Narrative

Similar Sites:

Site Name	Site ID	Site Narrative

State Correlation:
This site has been correlated with the following states:

Inventory Data References:

Data Source	Number of Records	Sample Period	State	County

Type Locality:

Relationship to Other Established Classifications:

Other References:
Data collection for this site was done in conjunction with the progressive soil surveys within the _____Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys

Characteristic Soils Are:	

Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester	2/15/80	Don Sylvester	2/15/80

Site Description Revision:

Author	Date	Approval	Date
Brenda Simpson	10/08/02	George Chavez	12/16/02